

## Bibliographic Information

**Inhalant drug delivery systems composed of anticholinergics and endothelin antagonists.** Montague, Meade Christopher J.; Pairet, Michel; Pieper, Michael P. (Boehringer Ingelheim Pharma KG, Germany). Ger. Offen. (2002), 16 pp. CODEN: GWXXBX DE 10113366 A1 20020926 Patent written in German. Application: DE 2001-10113366 20010320. Priority: . CAN 137:252999 AN 2002:733842 CAPLUS

## Patent Family Information

	Patent No.	Kind	Date	Application No.	Date
10	DE 10113366	A1	20020926	DE 2001-10113366	20010320
	CA 2441964	A1	20020926	CA 2002-2441964	20020307
	WO 2002074034	A2	20020926	WO 2002-EP2494	20020307
	WO 2002074034	A3	20031023		
15	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM,				
20	AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2002254930	A1	20021003	AU 2002-254930	20020307
	EP 1379225	A2	20040114	EP 2002-724207	20020307
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
25	JP 2004525920	T	20040826	JP 2002-572762	20020307
	US 2002183347	A1	20021205	US 2002-100659	20020318
	US 6608054	B2	20030819		
	US 2003203925	A1	20031030	US 2003-413065	20030414
30	US 2005148562	A1	20050707	US 2004-6940	20041208
<u>Priority Application</u>					
	DE 2001-10113366	A	20010320		
	WO 2002-EP2494	W	20020307		
35	US 2001-281874P	P	20010405		
	US 2002-100659	A1	20020318		
	DE 2000-10054042	A	20001031		
	US 2000-253613P	P	20001128		
	DE 2000-10062712	A	20001215		
40	DE 2000-10063957	A	20001220		
	US 2000-257220P	P	20001221		
	US 2000-257221P	P	20001221		
	DE 2001-10110772	A	20010307		
	DE 2001-10111058	A	20010308		
45	US 2001-281653P	P	20010405		
	US 2001-281857P	P	20010405		
	DE 2001-10138272	A	20010810		
	US 2001-314599P	P	20010824		
	US 2001-7182	B1	20011019		
50	US 2001-86145	B1	20011019		
	US 2001-27662	B1	20011220		
	DE 2002-10206505	A	20020216		
	US 2002-92116	A1	20020306		
	US 2002-93240	B1	20020307		
55	US 2002-369213P	P	20020401		
	US 2003-360064	A2	20030207		
	US 2003-413065	B2	20030414		
	US 2003-419358	A1	20030421		
	US 2003-613783	A2	20030703		
60	US 2004-763894	A2	20040123		

US 2004-775901	A2	20040210
US 2004-776757	A2	20040211
US 2004-824391	A2	20040414

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# **Abstract**

The invention concerns inhalants for the treatment of respiratory diseases that contain anticholinergics and endothelin antagonists; the inhalants can be dosed with or without propellants and can contain excipients.

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Anticholinergics are salts of tiotropium, oxitropium and ipratropium; endothelin antagonists are selected from the group of Tezosentan, Bosentan, Enrasentan, Sixtasentan, T-0201, BMS-193884, K-8794, PD-156123, PD-156707, PD-160874, PD-180988, S-0139 and ZD-1611. Thus an inhalant powder was composed of capsules that contained per capsule ( $\mu\text{g}$ ): tiotropium bromide 21.7; endothelin antagonist 270; lactose 4708.3.